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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/409,947 09/30/99 NIZRI

S QCPA990520

023696
Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego CA 92121-1714

WM02/0411

EXAMINER

WOLDETATIOS, Y

ART UNIT

PAPER NUMBER

2684

DATE MAILED:

04/11/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/409,947

Applicant(s)

NIZRI ET AL.

Examiner

Yemane Woldetatos

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-6, 9-11, 13-18, 20, 21, 23-27, 29-41, 45-50, 55- 59 and 61-74 is/are rejected.
- 7) ☒ Claim(s) 3, 7, 8, 12, 19-22, 28, 42-44, 51-54 and 60 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371⁶ of this title before the invention thereof by the applicant for patent.

2. Claims 1, 2, 5, 9-11, 13-18, 23, 30, 31, 33-38, 40, 45-50, 55, 62, 63, and 65-74 are rejected under 35 U.S.C. 102(e) as being anticipated by Agre (5978679).

Claims 1, 35, 67 and 71. Agre discloses in a mobile wireless telecommunications system, which includes base stations of a first type operating over a first air interface, and base stations of a second type operating over a second air interface, a method for reselection by a mobile station camped on a cell associated with a first base station, which is of the first type, of a second base station, which is of the second type, comprising:

receiving signals over the second air interface from the second base station (col. 5 lines 31-36);

evaluating a characteristic of the signals (col. 7 lines 4-21);

responsive to the characteristic, selecting the second base station in place of the first base station on a cell associated with the second base station (col. 7 lines 27-44), and

camping on a cell associated with the second base station (col. 7 lines 52-59).

Claims 2 and 38. Agre discloses a method according to claim 1, wherein one of the first and second air interfaces comprises a TDMA air interface, and the other comprises a CDMA air interface (col. 2 lines 61-65).

Claims 5 and 40. Agre discloses a method according to claim 2, wherein while the mobile station is camped on the cell associated with the base station operating over the CDMA air interface, it performs idle mode procedures generally in accordance with a GSM standard (col. 4 line 59 to col. 5 line 11).

Claim 9. Agre discloses a method according to claim 1, wherein receiving the signals over the second air interface comprises receiving signals using a radio transceiver in the mobile station which is also used to receive the signals over the first air interface (Fig. 1 item 101).

Claims 10 and 36. Agre discloses a method according to claim 9, wherein receiving the signals comprises receiving signals in either a GSM or a CDMA signaling mode (see abstract).

Claims 11 and 37. Agre discloses a method according to claim 1, wherein while the mobile station is camped on the cell associated with the first base station, it receives signals therefrom during intermittent active periods of the mobile station, and wherein receiving the signals over the second air interface comprises seeking and receiving signals during sleep periods of the mobile station intermediate the active periods (col. 4 line 59 to col. 5 line 11).

Claims 13, 15, 45 and 47. Agre discloses a method according to claim 1, wherein receiving the signals comprises initiating monitoring of signals over the second air interface responsive to an indication that a predetermined monitoring criterion has been met (col. 5 lines 11-19).

Claims 14 and 46. Agre does not mention a method according to claim 13, wherein the indication comprises a message broadcast to the mobile station over the first air interface that cells are available over the second air interface. However, this is inherent in the system.

Claims 16, 17, 48 and 49. Agre discloses a method according to claim 15, wherein the mobile station attempts to receive signals from a plurality of candidate cells over the first air interface, and wherein initiating the monitoring comprises initiating monitoring over the second air interface when the number of candidate cells over the first interface are below a predefined level for a predetermined period of time (col. 8 lines 11-31).

Claims 18 and 50. Agre discloses a method, wherein initiating the monitoring comprises initiating monitoring upon expiration of a predetermined time period during which monitoring over the second air interface has not occurred (col. 4 lines 39-58).

Claims 23 and 55. Agre discloses a method according to claim 1, wherein evaluating the characteristic comprises comparing the signals received from the second base station to signals received over the first air interface from the first base station and applying reselection criteria to the received signals so as to determine whether to select the second base station (col. 7 lines 27-44).

Claims 30 and 62. Agre discloses a method according to claim 1, wherein evaluating the characteristic comprises comparing power levels of the signals received over the first and second air interfaces (col. 5 lines 31-44).

Claims 31 and 63. Agre discloses a method according to claim 1, wherein evaluating the characteristic comprises comparing path-loss criteria derived from the signals received over the first and second air interfaces (col. 5 lines 11-30).

Claims 33 and 65. Agre discloses a method according to claim 1, wherein selecting the second base station comprises receiving information broadcast over the first air interface in relation to criteria for interface reselection, and selecting the second base station responsive to the broadcast information (col. 7 lines 22-44).

Claims 34 and 66. Agre discloses a method according to claim 1, wherein selecting the second base station comprises storing information in a memory module of the mobile station in relation to criteria for interface reselection, and selecting the second base station responsive to the stored information (col. 8 lines 9-21).

Claims 68 and 72.. Agre discloses a method according to claim 67, wherein evaluating the characteristic of the signals comprises applying a threshold criterion to the signals, such the threshold for reselection is higher when the second cell belongs to a different location area from the first cell that when it belongs to the same location area (col. 8 lines 9-21).

Claims 69, 70, 73 and 74. Agre discloses a method according to claim 67, a means for determining the location of cells from the received broadcasted pilot signals (col. 4 lines 39-58).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 4, 24-27, 29, 32, 39, 57-59, 61 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agre.

Claims 4 and 39. Agre does not mention a method according to claim 2, wherein selecting the second base station comprises applying cell selection and reselection procedures over the CDMA air interface in a manner substantially transparent to a GSM radio interface protocol layer of the mobile station. However, official notice is taken that use of desired interfacing protocol layer is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to use substantially system transparent interface protocol layer in order to maintain system compatibility.

Claims 24-27 and 56-59. Agre fails to disclose a method, wherein applying the criteria comprises weighting measured characteristics of the signal responsive to a predetermined air interface preference and the preference is set by a user or by a network and the mobile station stores a record of the preference. However, Agre discloses means for setting preferences (col. 7 lines 27-31). Therefore, it would have been obvious to one of ordinary skill in the art to add to Agre a means for setting a criteria responsive to a predetermined air interface preference, and means for setting preference by the user or by a network and means for storing a record of the preference in order to enhance means for system controls.

Claims 29 and 61. Agre does not mention a method as in claim 23, wherein comparing the signals comprises performing an assessment of strong neighbor cells when the mobile station is in a border area of coverage provided over the first air interface. However, this is inherent in the system.

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Claims 32 and 64. Agre does not mention a method according to claim 1, wherein selecting the second base station comprises selecting a base station responsive to selection by the mobile station of a public land mobile network with which to communicate. However, official notice is taken that Public Land Mobile Network is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to include PLMN in Agre's disclosure in order to enhance user access.

5. Claims 6 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agre in view of Raith et al. (5768267).

Claims 6 and 41. Agre does not disclose a method according to claim 1, wherein selecting the second base station in place of the first base station comprises using a single radio resource management protocol layer in the mobile station supporting both GSM/TDMA and CDMA operating modes. However, Raith teaches radio resource management protocol (col. 8 lines 10-15). Therefore, it would have been obvious to one of ordinary skill in the art to modify Agre by adding radio resource management protocol as taught by Raith in order to maintain standards.

Allowable Subject Matter

6. Claims 3, 7, 8, 12, 19-22, 28, 42-44, 51-54 and 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 3. The prior art fails to teach a method according to claim 2, wherein evaluating the characteristic comprises applying a CDMA or a TDMA path loss criterion to the signals (col. 5 lines 11-30).

Claim 7. The prior arts fail to teach a method according to claim 6, wherein the radio resource management protocol layer comprises parallel GSM and CDMA protocol sublayers and a combiner sublayer which selects either the GSM or the CDMA operating mode.

Claims 12 and 44. The prior art fails to teach a method according to claim 1, wherein receiving the signals comprises controlling the mobile station to receive signals over the second air interface responsive to a detected loss of coverage by signals on the first air interface.

Claim 19. The prior arts fail to teach a method according to claim 1, wherein receiving the signals comprises regulating energy expended by the mobile station in receiving the signals responsive to a desired level of energy consumption by the mobile station.

Claims 28 and 60. The prior arts fail to teach a method according to claim 23, wherein applying the criteria comprises applying a predetermined hysteresis factor so as to prevent recurrent reselection of the air interface.

Claim 42. The prior art fails to teach a mobile station as in claim 41, wherein the radio resources management protocol layer comprises parallel GSM and CDMA protocol sublayers and a combiner sublayer which selects either the GSM or the CDMA operating mode.

Claim 51. The prior art fails to teach a mobile station as in claim 35, wherein the control circuitry is programmed to regulate energy expended by the mobile station in receiving the signals responsive to a desired level of energy consumption by the mobile station.

Response to Arguments

7. Applicant's arguments with respect to claims 1-74 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Miya et al. (5572516), Adachi (5953324), Diachina et al. (6016428), Coursey (5950130) Dahlin et al. (6154647), Buytaert et al. (6198919 B1), St-Pierre et al. (5901352) and Rostoker et al. (6006105) teach method and system for controlling multiple networks and associated services in a cellular communications system.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yemane Woldetatos whose telephone number is 703-308-9596. The examiner can normally be reached on Monday thru Friday: 9-18:30, off 1st Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter can be reached on 703-308-6732. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-6306 for regular communications and 703-308-6296 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.


DANIEL HUNTER

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Yemane Woldetatos
Examiner

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March 30, 2001